

28.20

Work Order ID 153719

Friday, November 25, 2016 7:41:55 AM

153719

Page 1

Item ID: D2704 **Accept** ***N900040100*** **Setup Start *NS1***
Revision ID: **Stop *NS2***
Item Name: Cross Brace
Start Date: 11/30/2016 **Start Qty:** 1.00 ***1*** **Cust Item ID:**
Required Date: 12/7/2016 **Req'd Qty:** 1.00 ***1*** **Customer:**
Reference:

Approvals: **Process Plan:** DAS 21 9-89 **Date:** NOV 25 2016 **Tooling:** **Date:** **Run Start *NR1***
QC: **Date:** **SPC (Y/N):** **Date:** **Stop *NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D2704	Rev A1								
100	NC BRAKE	0.00							
100									
Brake NC	Memo	0.07							
Brake NC	Punch tube 304/316 with 2B finish Deburr								
110	QC5- Inspect part completeness to step on W/O	0.00							
110									
QC	Memo	0.00							
Quality Control									
120	White Gloss(Ref:4.3.5.2) per QSI005 4.3-Steel	0.00							
120									
Powdercoat	Memo	0.01							
Powder Coating	START TIME: <u>11:10</u> OVEN TEMPERATURE:								
	<u>400°</u> FINISH TIME: <u>11:40</u>								

1 FF Dec. 23 - 2016① 17.01.03 DAS 9 9-891 φ 17.01.04. 333

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
							Completed By		
							Lead hand / Supervisor Approval Verification		
							QC / QA Coordinator Approval		

Root Cause				FAULT CATEGORY			
Environment ☐	Design ☐	Doc/Data ☐	Equip/Tooling ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐
Handling/Pre ☐	Material ☐	Internal Transport ☐	Tribal Knowledge ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐
LOA ☐	Substation ☐	Past Expiry Date ☐	Misidentified ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐
				Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐
				Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐
				Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐
				Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐
				Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐
				Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐
				Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐
				OTHER : ☐			

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Page 2

Item ID: D2704

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: Cross Brace

Start Date: 11/30/2016 Start Qty: 1.00

1

Cust Item ID:

Required Date: 12/7/2016 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals:

Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run Start

NR1

QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130	QC3- Inspect Part Finish	0.00							
130									
QC	Memo	0.00				1			DAS 38 9-89 9 2017
Quality Control									
140	Identify as per dwg & Stock Location: <u>57360</u>	0.00							
140									
Packaging	Memo	0.00				1			DAS 6 9-89 JAN 11 2017
Packaging									
150	QC21- Final Inspection - Work Order Release	0.00							
150									
QC	Memo	0.02							DAS 21 9-89 JAN 16 2017
Quality Control									
									DAS 21 9-89 JAN 11 2017

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WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐							
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval			
Description Work Order Deviation				Disposition							

Root Cause				FAULT CATEGORY							
Environment	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong	☐
Design	☐	Operator	☐	Bending	☐	Set-up	☐	Folio/Program	☐	Outside Dimensions	☐
Doc/Data	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐	Grain	☐	Over/Under tolerance	☐
Equip/Tooling	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐	Weld	☐	Part Incorrect	☐
Handling/Pre	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐	Wrong Stock Pulled	☐	Part Lost/Missing	☐
Material	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐	Out of Sequence	☐	Part Moved	☐
Internal Transport	☐	Poor Information	☐	Crushing	☐	Countersink	☐	Off-set	☐	Drawing	☐
Tribal Knowledge	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐	Mislabeled	☐	Finish	☐
LOA	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐	Fit/Function	☐	Misread	☐
Substation	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐	Misaligned/off center	☐	Turning Sequence	☐
Past Expiry Date	☐	Manufacturing Process	☐	OTHER : _____							
Misidentified	☐	Past Due	☐								

Picklist Print

Friday, November 25, 2016 7:41:55 AM

Work Order ID: 153719

153719

Parent Item: D2704

D2704

Parent Item Name: Cross Brace

Start Date: 11/30/2016

Required Date: 12/7/2016

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP D02.04.15Added dwg Rev.A1NG

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M304TR0.500W.035		Purchased	No			100	f	98.4830	2.35	2.473684			
M304TR0 500W 0.35									**			DEC 23 2016	
304 RD Tube .500 x .035W													

Location

Loc Qty

Loc Code

GA

25.6272599

m135373

25.6272599

GA002

56.5124652

m132872

1.6822064

m133611

3.994895

m134504

50.8353638

MAT

16.3432595

m135498

16.3432595

2.473684

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

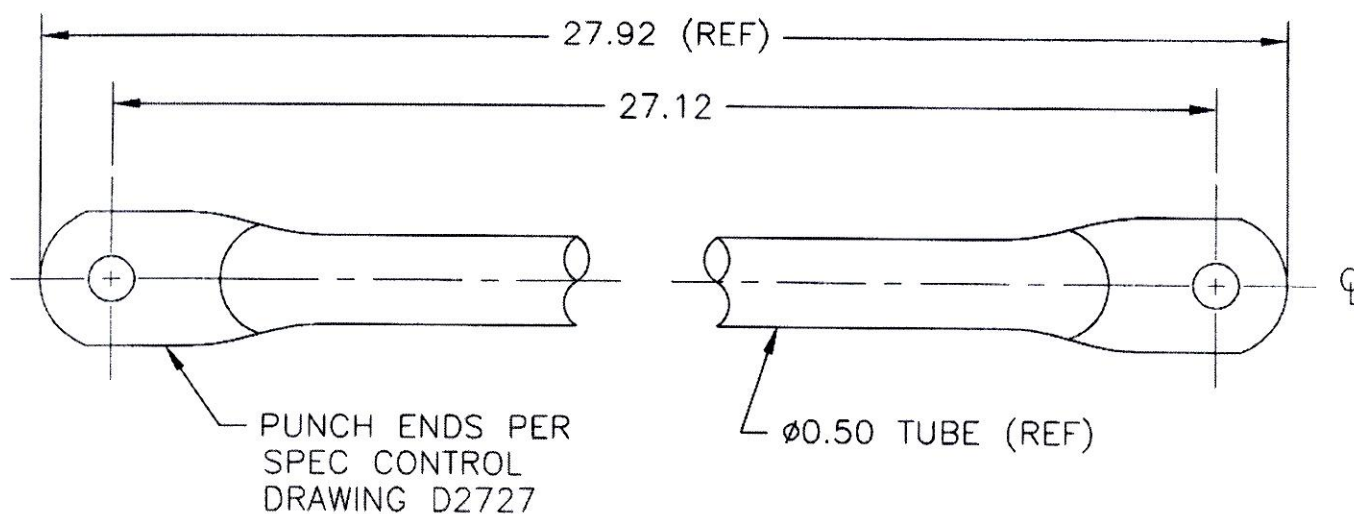
Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
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Root Cause				FAULT CATEGORY			
Environment ☐	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐
Design ☐	☐	Operator	☐	Bending	☐	Set-up	☐
Doc/Data ☐	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐
Equip/Tooling ☐	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐
Handling/Pre ☐	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐
Material ☐	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐
Internal Transport ☐	☐	Poor Information	☐	Crushing	☐	Countersink	☐
Tribal Knowledge ☐	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐
LOA ☐	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐
Substation ☐	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐
Past Expiry Date ☐	☐	Manufacturing Process	☐	OTHER : _____			
Misidentified ☐	☐	Past Due	☐				



DESIGN <i>KE</i>	DRAWN BY <i>KE</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>CP</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D2704	REV. A SHEET 1 OF 1
DATE 98.08.24		TITLE STRUT	SCALE NTS
A	98.08.24	NEW ISSUE	
AI	<i>CP</i> 02.03.22	ADD FINISH	

RELEASED
99.11.02 KE



SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 153719 MJS
16-11-25

MATERIAL: AISI 304/316 STAINLESS STEEL TUBE, $\phi 0.50 \times 0.035$ WALL
TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
FINISH: POWDER COAT WHITE (4.3.5.2) PER DART QSI 005 4.3 AI